

WE CLAIM:

1. A conveyor for moving at least one article along a predetermined path, said conveyor having an endless belt entrained about a pair of supports spaced apart along said path, a support surface on said belt to receive said article and a drive mechanism to move said belt relative to said supports along said path, said support surface having at least one pair of abutments spaced apart in the direction of said path to inhibit relative movement between said article and said belt along said predetermined path.
2. The conveyor according to claim 1 wherein the said moving articles are microtiter plates.
3. The conveyor according to claim 1 wherein said abutments extend laterally across said belt in a direction normal to said predetermined path.
4. The conveyor according to claim 3 wherein said abutments are continuous ribs extending across said surface.
5. The conveyor according to claim 1 wherein a plurality of pairs of abutments are provided on said support surface at spaced locations along said support surface.
6. The conveyor according to claim 1 wherein said drive mechanism is reversible to move said belt in either direction along said path.
7. The conveyor according to claim 6 wherein said drive mechanism includes a servo motor operable to adjust the position of said belt in either direction along said belt.
8. The conveyor according to claim 1 wherein side rails extend between said supports and project above said support surface to locate said article laterally on said belt.

9. The conveyor according to claim 1 wherein said abutments include opposing, outwardly bevelled top edges for guiding said article for positioning on said belt, between said abutments.
10. The conveyor according to claim 1 wherein said abutments extend along a portion of the length of said belt.
11. The conveyor according to claim 1 wherein said abutments comprise ribs.
12. The conveyor according to claim 1 wherein a plurality of pairs of abutments are provided on said belt.
13. The conveyor according to claim 1 wherein said belt includes a drive surface on the opposing said support surface, said drive surface being provided with a plurality of cogs for engaging corresponding ribs on a drive pulley connected to said drive mechanism.
14. A conveyor system to move an article along a predetermined path, comprising one or more workstations, a conveyor extending along said predetermined path between said workstations, said conveyor having an endless belt entrained about a pair of supports spaced apart along said path, a support surface on said belt to receive said article and a drive mechanism to move said belt relative to said supports along said path, said support surface having a pair of abutments positioned on said belt to engage oppositely directed surfaced on said article and inhibit relative movement between said belt along said path.
15. The conveyor system according to claim 14 wherein said article comprises a microtiter plate.
16. The conveyor system according to claim 14 wherein said workstations include robotic arms, said arms being independently adjustable to operate upon an article on said belt.

17. The conveyor system according to claim 16 wherein said drive mechanism includes a servo motor to position said belt relative to said workstations.

18. The conveyor system according to claim 17 wherein said servo motor is reversible to move said belt in either direction along said path and between said workstations.

19. A conveyor system for moving an article along a predetermined path between one or more workstations, the system comprising:

- an conveyor belt extending between a drive pulley and an idler pulley, said belt including an upper, article supporting surface a lower pulley engaging surface;

- a support structure for said belt and said pulleys; and

- a drive mechanism for driving said drive pulley;

wherein said article supporting surface of said conveyor belt includes a pair of abutments for receiving said article and for maintaining said article in position as said belt moves the article along said predetermined path.

20. The system of claim 19 wherein upper edges of said abutments are bevelled for guiding said article onto the belt.

21. The system of claim 19 wherein said support structure includes a pair of side rails that extend along the length of said belt and rise above the article supporting surface, whereby said article is maintained on said belt as the belt is moved.

22. The system of claim 19 wherein said pulley engaging surface includes a plurality of cogs for engaging complementary ribs extending from said drive pulley.

23. The system of claim 19 wherein said drive mechanism includes a reversible servo motor.

24. A conveyor system to move microtiter articles along a predetermined path, the system comprising a pair of workstations, a conveyor extending along said predetermined path between said pair of workstations, said conveyor having an endless belt entrained about a pair of supports spaced apart along said path, a support surface on said belt to receive said articles and a drive to move said belt relative to said supports along said path, said support surface having a pair of raised abutments positioned on said belt to engage oppositely directed surfaces on said articles and inhibit relative movement between said articles and said belt along said path, wherein said drive comprises a servo motor to position said belt relative to said workstations and wherein said servo motor is reversible to move said belt in either direction along said path.

25. A conveyor system according to claim 24 wherein each of said workstations includes a robotic arm, said arms being independently adjustable to operate upon said articles on said belt.

26. The system of claim 24 wherein said belt provides planar surfaces extending between said abutments to engage and support a bottom surface of said articles.

27. The system of claim 25 wherein said robotic arm places and removes said articles between said pair of abutments on said belt.

28. The system of claim 24 wherein said servo motor is controlled by a controller for positioning said articles on the belt in desired locations along said path.